

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT '05. 7. 25

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/006411

International filing date (day/month/year)
25.03.2005

Priority date (day/month/year)
31.03.2004

International Patent Classification (IPC) or both national classification and IPC
A61K7/48

Applicant
SHOWA DENKO K.K.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Sala-Jung, N

Telephone No. +49 89 2399-6050



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**International application No.
PCT/JP2005/006411**IAP5 Rec'd PCT/PTO 28 SEP 2006****Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/006411

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3
	No: Claims	1-2,4-7
Inventive step (IS)	Yes: Claims	
	No: Claims	1-7
Industrial applicability (IA)	Yes: Claims	1-7
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

1 Reference is made to the following documents:

D1 : XP002333461
D2 : XP002333462
D3 : US 6 586 588 B1
D4 : WO 02/33034 A
D5 : JP 11 180818 A
D6 : XP009049312
D7 : JP 08 041104 A
D8 : XP002072527

2 INDEPENDENT CLAIM 1

2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses a cosmetic emulsion containing 5% LaraCare A200 and providing moisturization to the skin (p.1). This additive is also known as galactoarabinan (p.2) which is a highly branched polysaccharide (D2 Lärchengummi Typ II figure b). One manner of defining polysaccharides is given in D3 (col.2, l.50-54, 59-62; col.3, l.48, 49, 61). According to this definition galactose and arabinose are the anhydrosugar units for LaraCare A200. Moreover, branched and multi-branched are equivalent terms as multi is a vague prefix which can not be relied upon to distinguish the claimed invention from the prior art (PCT Guidelines 5.34). D1 is therefore considered to be prejudicial to the novelty of not only claim 1 but also claims 2 and 4 to 7.

2.2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D4 discloses (ex.1) a detergent composition containing 1wt% of carboxymethyl guar as anionic polysaccharide (p.15, l.24-27). This polymer is described (p.2, l.16-30) as having anhydrohexose units in the backbone and anhydropentose and/or anhydrohexose units in the branches. A cosmetic use as external preparation for the skin is not disclosed. The detergent composition is

nevertheless suitable for such a use (PCT Guidelines 5.21) and therefore anticipates the subject-matter of claims 1, 2 and 4 to 7.

- 2.3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D5 discloses (PAJ abstract) a skin preparation for external use containing glycogen or amylopectin as branched polysaccharide. A similar reasoning as in §2.1 leads to the conclusion that claims 1, 2 and 4 to 7 lack novelty with respect to D5.

- 2.4 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D6 discloses (top right col. p.84) a moisturizing solution containing 0.4% LC-Gluc which is a β -(1,6)-branched β -(1,3)-glucan (bottom right col. p.80). A similar reasoning as in §2.1 leads to the conclusion that claims 1, 2 and 4 to 7 lack novelty with respect to D6.

3 DEPENDENT CLAIMS 2-7

Dependent claims 2-7 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT):

- 3.1 Dependent claims 2 and 4 to 7 lack novelty with respect to D1, D4, D5 and D6 (see reasoning under §2).

- 3.2 Dependent claim 3 can not be considered as involving an inventive step in the sense of Article 33(3) PCT with respect to D6 to D8.

It is known from D6 and D8 that immunity activation of glucans results in moisturizing properties. It is therefore not surprising that the polysaccharides according to present claim 3, which are known to be immunity activating (D7 cl.8, §16), are moisturizers.

The comparative examples in the present application compare the moisturizing polysaccharides according to present claim 3 to compounds such as glycogen, glycine, xanthan gum (known as skin-conditioners in the CTFA Handbook) and hydroxyethylcellulose (known as film-former in the CTFA Handbook) which are not conventionnal moisturizers.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/JP2005/006411